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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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08/25/2003

Kenichiro Nakamura

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EXAMINER

PILKINGTON, JAMES

ART UNIT

PAPER NUMBER

3656

NOTIFICATION DATE

DELIVERY MODE

03/31/2009

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/646,704	<b>Applicant(s)</b> NAKAMURA ET AL.	
	<b>Examiner</b> JAMES PILKINGTON	<b>Art Unit</b> 3656	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 30 January 2009.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-3,8-10,16-20,22-25 and 27-31 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3,8-10,16-20,22-25 and 27-31 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 January 2009 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Drawings***

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the second flat sections of the elastic member being flush against a flat surface of the second fixed wall must be shown or the feature(s) canceled from the claim(s) (How are the second flat sections “flush against” the flat surface when there is a washer between them?). No new matter should be entered.
2. The drawings filed 1/30/09 are object to under 37 CFR 1.84(l) which requires that lines, numbers and letters be uniformly thick and well defined, clean, durable, and black. The hand written reference characters in the replacement drawings are not clean, well defined and uniformly thick.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an

Art Unit: 3656

application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Claim Objections***

3. Claim 20 objected to because of the following informalities: line 3 "an inner-most" should be - -the inner-most- -. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

4. Claims 1-3, 8-10, 16-20, 22, 25 and 27-31 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claims 1 and 17 recite the limitation "an outer diameter of the elastic member is substantially equal to an inner diameter of said cylindrical portion." There is no support in the specification for the diameters being substantially equal. The drawings even show a gap between the two diameters. If something is purposely designed to have gap between it an another object how are the diameters "substantially equal"?

Claim 30 recites that "the second flat sections are disposed flush against a flat surface of the second fixed wall." There is no support in the specification for the elements being "flush against" each other. The drawings show a washer disposed

Art Unit: 3656

between the two members. How are things “flush against” each other when there is a washer disposed between them?

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-3, 8-10, 16-20, 22, 27, 28, 30 and 31, as best understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsergas, US PGPub 2004/0031343, in view of Yeh, US PGPub 2002/0124673 (cited in first office action), further in view of Kitamura, EP1203890, and Riley Jr., USP 3,320,824.

Re clms 1-3, 8-10, 27, 28, 30 and 31, Tsergas discloses a gear transmission device comprising:

- A pair of first (134B) and second fixed walls (111B), said first and second fixed walls opposing each other with respect to an axial direction of a first gear shaft (128)
- A first gear (122) positioned on said first gear shaft (128) between the first and second fixed walls (134B and 111B), said gear being axially movable with respect to said first and second fixed walls
- A second shaft (126) having a relatively large diameter gear (136) on a first end and a relatively smaller diameter gear (121) on a second end,

Art Unit: 3656

with a space (see Figure 2A) separating the relatively larger diameter gear (136) and the relatively small diameter gear (121)

- Wherein said small diameter gear (121) operatively engages said first gear (122)
- A large diameter ring gear (140) operatively engaged with said first gear (122, operatively engaged via gears on shaft 126)
- Where the first fixed wall (111b) is a crank shaft side wall (output crank 142) and the second fixed wall (134b) is another side wall

Tsergas does not disclose regulating means positioned between the first gear and the second fixed wall wherein the regulating means includes: a plane washer having one face positioned against a planar surface on an end face of the second fixed wall, a cylindrical portion being formed on a first opposed end face of the first gear, an elastic member positioned between the cylindrical portion and the plane washer, a predetermined space formed between the cylindrical portion and the plane washer, and wherein the cylindrical portion is capable of operative contact with said planar end surface of said end wall through direct contact with the plane washer.

Yeh teaches regulating means positioned between a first gear (3) and a fixed wall (9 and end portion of 8, see Figure 3) wherein the regulating means includes: a plane washer (7) having one face positioned against a planar surface (end portion of 8) on an end face of the second fixed wall (9), a cylindrical portion (formed by groove 42) being formed on a first opposed end face of the first gear (3), an elastic member (5) positioned between the cylindrical portion (outer ring formed by groove 42) and the

Art Unit: 3656

plane washer (7), a predetermined space (between 7 and end face of 4) formed between the cylindrical portion and the plane washer, and wherein the cylindrical portion is capable of operative contact with said planar end surface of said end wall through direct contact with the plane washer (upon compression) for the purpose of providing an impact absorbing device in a gear transmission system (paragraph 0004).

It would have been obvious to one having ordinary skill in the art at the time of the invention to modify the teachings of Tsergas and provide regulating means positioned between the first gear and the second fixed wall wherein the regulating means includes: a plane washer having one face positioned against a planar surface on an end face of the second fixed wall, a cylindrical portion being formed on a first opposed end face of the first gear, an elastic member positioned between the cylindrical portion and the plane washer, a predetermined space formed between the cylindrical portion and the plane washer and wherein the cylindrical portion is capable of operative contact with said planar end surface of said end wall through direct contact with the plane washer, as taught by Yeh, for the purpose of providing an impact absorbing device in a gear transmission system.

Tsergas in view of Yeh as applied above does not disclose that the elastic member is a deformable closed ring, wherein an outer perimeter of the elastic member has a circular shape when viewed in plan view, an outer diameter being substantially equal to an inner diameter of said cylindrical portion, an inner-most perimeter of the elastic member has a non-circular shaped when viewed in plan view, the inner-most

Art Unit: 3656

perimeter having at least a portion of which fits directly around an outer cylindrical surface of said first gear shaft and a plurality of first flat sections and a plurality of second flat sections, the first and second flat sections are arranged so as to alternate with each other in a circumferential direction and regardless of the bending amount the first and second sections are parallel and the second section is flush against the wall.

Kitamura teaches an elastic member (spring/wave washer 7 or 8) that is a deformable closed ring in the form of a wave washer, wherein an outer perimeter of the elastic member has a circular shape (see Figures 3 and 4) when viewed in plan view, an inner-most perimeter of the elastic member has a non-circular shape (7a or 8a) when viewed in plan view, the inner-most perimeter (7a or 8a) having at least a portion of which fits directly around an outer cylindrical surface of said first gear shaft (see at least Figures 3 and 4) and a plurality of first flat sections (see Figure 4, right side of 8 contacting 5) and a plurality of second flat sections (see Figure 4, left side of 8 contacting wall 2b), the first and second flat sections are arranged so as to alternate with each other in a circumferential direction and regardless of the bending amount the first and second sections are parallel (see Figure 4) and the second section is flush against the wall (2b).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Tsergas in view of Yeh with an elastic member that is a deformable closed ring that is in the form of a wave washer, and wherein an outer perimeter of the elastic member has a circular shape when viewed in plan view, an inner-most perimeter of the elastic member has a non-circular shape when viewed in



Art Unit: 3656

plan view, the inner-most perimeter having at least a portion of which fits directly around an outer cylindrical surface of said first gear shaft and a plurality of first flat sections and a plurality of second flat sections, the first and second flat sections are arranged so as to alternate with each other in a circumferential direction and regardless of the bending amount the first and second sections are parallel and the second section is flush against the wall, since substituting one elastic member for another (spring of Yeh with spring/wave washer of Kitamura) would achieve predictable results of removing vibration from the system well simplifying the gear structure required with a spring (i.e. no bore is required in the gear to hold the spring) thus reducing manufacturing/assembly time and cost. Upon the combination the spring/wave washer of Kitamura would have to have a diameter substantially equal to the inner diameter of the cylindrical portion in order to fit within the gear of Yeh.

Tsergas in view of Yeh and Kitamura discloses all of the claimed subject matter as applied above.

Tsergas in view of Yeh and Kitamura does not disclose that the cylinder portion consists of only one cylinder portion.

Riley, Jr. teaches an arrangement which consists of only one cylinder portion on the gear member (see Fig 5) which houses an elastic element (68) for the purpose of aiding in the alignment of the shaft, gear and elastic member (C4/L1-22, simplifies elements to be aligned).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Tsergas in view of Yeh and Kitamura and provide only one cylinder portion, as taught by Riley, Jr., for the purpose of aiding in alignment of the shaft, gear and elastic member.

Re clm 16, Tsergas in view of Yeh, Kitamura and Riley, Jr. discloses that the plane washer (7) is disposed in a position opposite said cylindrical portion (as disclosed by Yeh above).

Re clms 17-20 and 22, Tsergas discloses a gear transmission device comprising:

- A pair of first (134B) and second fixed walls (111B), said first and second fixed walls opposing each other with respect to an axial direction of a first gear shaft (128)
- A first gear (122) positioned on said first gear shaft (128) between the first and second fixed walls (134B and 111B), said gear being axially movable with respect to said first and second fixed walls
- A second shaft (126) having a relatively large diameter gear (136) on a first end and a relatively smaller diameter gear (121) on a second end, with a space (see Figure 2A) separating the relatively larger diameter gear (136) and the relatively small diameter gear (121)
- Wherein said small diameter gear (121) operatively engages said first gear (122)

Art Unit: 3656

- A large diameter ring gear (140) operatively engaged with said first gear (122, operatively engaged via gears on shaft 126)
- Where the first fixed wall (111b) is a crank shaft side wall (output crank 142) and the second fixed wall (134b) is another side wall

Tsergas does not disclose regulating means comprising an elastic member positioned between said first gear and said second fixed wall, a single cylindrical portion being formed on a first opposed end face of the first gear, the cylindrical portion facing in a direction toward a planar surface on the end face of the second fixed wall, wherein the elastic member is surrounded by said cylindrical portion and wherein the regulating means includes a plane washer disposed in a position opposite to said cylindrical portion.

Yeh teaches regulating means comprising an elastic member (5) positioned between a first gear (3) and a fixed wall (9 and end portion of 8, see Figure 3), a single cylindrical portion (outer ring formed by groove 42) being formed on a first opposed end face of the first gear (3), the cylindrical portion facing in a direction toward a planar (end portion of 8) surface of the fixed wall, wherein the elastic member (5) is surrounded by said cylindrical portion (see Figure 3) and wherein the regulating means includes a plane washer (7) disposed in a position opposite the cylindrical portion for the purpose of providing an impact absorbing device in a gear transmission system (paragraph 0004).

It would have been obvious to one having ordinary skill in the art at the time of the invention to modify the teachings of Tsergas and provide regulating means

Art Unit: 3656

comprising an elastic member positioned between said first gear and said second fixed wall, a single cylindrical portion being formed on a first opposed end face of the first gear, the cylindrical portion facing in a direction toward a planar surface on the end face of the second fixed wall, wherein the elastic member is surrounded by said cylindrical portion and wherein the regulating means includes a plane washer disposed in a position opposite to said cylindrical portion, as taught by Yeh, for the purpose of providing an impact absorbing device in a gear transmission system.

Tsergas in view of Yeh as applied above does not disclose that the elastic member is a deformable closed ring, an outer diameter being substantially equal to an inner diameter of said cylindrical portion, an inner-most perimeter of the elastic member has a non-circular shaped when viewed in plan view, and the inner-most perimeter having at least a portion of which fits directly around an outer cylindrical surface of said first gear shaft.

Kitamura teaches an elastic member (spring/wave washer 7 or 8) that is a deformable closed ring in the form of a wave washer, an inner-most perimeter of the elastic member has a non-circular shape (7a or 8a) when viewed in plan view and the inner-most perimeter (7a or 8a) having at least a portion of which fits directly around an outer cylindrical surface of said first gear shaft (see at least Figures 3 and 4).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Tsergas in view of Yeh with an elastic member that is a deformable closed ring that is in the form of a wave washer, an inner-most perimeter of

Art Unit: 3656

the elastic member has a non-circular shape when viewed in plan view and the inner-most perimeter having at least a portion of which fits directly around an outer cylindrical surface of said first gear shaft, since substituting one elastic member for another (spring of Yeh with spring/wave washer of Kitamura) would achieve predictable results of removing vibration from the system well simplifying the gear structure required with a spring (i.e. no bore is required in the gear to hold the spring) thus reducing manufacturing/assembly time and cost. Upon the combination the spring/wave washer of Kitamura would have to have a diameter substantially equal to the inner diameter of the cylindrical portion in order to fit within the gear of Yeh.

Tsergas in view of Yeh and Kitamura discloses all of the claimed subject matter as applied above.

Tsergas in view of Yeh and Kitamura does not disclose that the cylinder portion consists of only one cylinder portion.

Riley, Jr. teaches an arrangement which consists of only one cylinder portion on the gear member (see Fig 5) which houses an elastic element (68) for the purpose of aiding in the alignment of the shaft, gear and elastic member (C4/L1-22, simplifies elements to be aligned).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Tsergas in view of Yeh and Kitamura and provide only one cylinder portion, as taught by Riley, Jr., for the purpose of aiding in alignment of the shaft, gear and elastic member.

7. Claims 23 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsergas, US PGPub 2004/0031343, in view of Yeh, US PGPub 2002/0124673 and further in view of Riley, Jr., USP 3,320,824.

Re clms 23 and 24, Tsergas discloses a gear transmission device comprising:

- A pair of first (134B) and second fixed walls (111B), said first and second fixed walls opposing each other with respect to an axial direction of a first gear shaft (128)
- A first gear (122) positioned on said first gear shaft (128) between the first and second fixed walls (134B and 111B), said gear being axially movable with respect to said first and second fixed walls
- A second shaft (126) having a relatively large diameter gear (136) on a first end and a relatively smaller diameter gear (121) on a second end, with a space (see Figure 2A) separating the relatively larger diameter gear (136) and the relatively small diameter gear (121)
- Wherein said small diameter gear (121) operatively engages said first gear (122)
- A large diameter ring gear (140) operatively engaged with said first gear (122, operatively engaged via gears on shaft 126)

Tsergas does not disclose that the first gear has a cylindrical portion formed on one side thereof and regulating means comprising an elastic member having first and

Art Unit: 3656

second surfaces, the elastic member being disposed directly around the first gear shaft with the first side thereof directly facing the fixed gear, a plane washer disposed directly around the first gear shaft, the plane washer having a first side with an inner surface portion directly facing a second surface of the elastic member, an outer surface portion disposed radially outward with respect to the inner surface portion and directly facing end of the cylinder portion, wherein the regulating means is adapted to regulate an increase of a bending amount of the elastic member by a predetermined value and when the elastic member is in a compressed state, only the outer surface portion of the plane washer is able to contact the end of the cylinder portion.

Yeh teaches a gear (3) having a cylindrical portion (4, created by groove (42) formed on one side thereof and regulating means comprising an elastic member (5) having first and second surfaces (end in the gear and end on the washer), the elastic member being disposed directly around the first gear shaft (11) with the first side thereof directly facing the fixed gear (3), a plane washer (7) disposed directly around the first gear shaft (11), the plane washer (7) having a first side with an inner surface portion directly facing a second surface (end contacting plane washer) of the elastic member (5), an outer surface portion (outside of spring 5) disposed radially outward with respect to the inner surface portion and directly facing the end of the cylinder portion (4), wherein the regulating means is adapted to regulate an increase of a bending amount of the elastic member by a predetermined value (comes in contact with the plane washer to regulate) and when the elastic member is in a compressed state, only the outer surface portion of the plane washer is able to contact the end of the cylinder portion

Art Unit: 3656

(when compressed the spring expands radially therefore only the outer surface of the spring will contact the cylindrical portion) for the purpose of providing an impact absorbing device in a gear transmission system (paragraph 0004).

It would have been obvious to one having ordinary skill in the art at the time of the invention to modify the teachings of Tsergas and provide a cylindrical portion formed on one side of the gear and regulating means comprising an elastic member having first and second surfaces, the elastic member being disposed directly around the first gear shaft with the first side thereof directly facing the fixed gear, a plane washer disposed directly around the first gear shaft, the plane washer having a first side with an inner surface portion directly facing a second surface of the elastic member, an outer surface portion disposed radially outward with respect to the inner surface portion and directly facing end of the cylinder portion, wherein the regulating means is adapted to regulate an increase of a bending amount of the elastic member by a predetermined value and when the elastic member is in a compressed state, only the outer surface portion of the plane washer is able to contact the end of the cylinder portion, as taught by Yeh, for the purpose of providing an impact absorbing device in a gear transmission system.

Tsergas in view of Yeh discloses all of the claimed subject matter as applied above.

Tsergas in view of Yeh does not disclose that the cylinder portion consists of only one cylinder portion.



Riley, Jr. teaches an arrangement which consists of only one cylinder portion on the gear member (see Fig 5) which houses an elastic element (68) for the purpose of aiding in the alignment of the shaft, gear and elastic member (C4/L1-22, simplifies elements to be aligned).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Tsergas in view of Yeh and provide only one cylinder portion, as taught by Riley, Jr., for the purpose of aiding in alignment of the shaft, gear and elastic member.

8. Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tsergas '343 in view of Yeh '673, Kitamura EP'890 and Riley, Jr. '824.

Tsergas in view of Yeh, Kitamura and Riley, Jr. discloses all of the claimed subject matter as described above. Yeh further discloses that the end face of the fixed wall (9) is smaller than the cylindrical portion (formed by groove 43, end of 4, see Figure 2) formed on the first gear (3).

Tsergas in view of Yeh, Kitamura and Riley, Jr. does not disclose that the one face of the plane washer is larger than the end face of the second fixed wall.

It would have been an obvious matter of design choice to make the one face of the plane washer larger than the end face of the fixed wall, since such a modification would have involved a mere change in size of a component. A change in size is generally recognized as being within the level of ordinary skill in the art.

9. Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tsergas '343 in view of Yeh '673, Kitamura EP'890 and Riley, Jr. '824 and further in view of Peterson, USP 4,864,443.

Tsergas in view of Yeh, Kitamura and Riley, Jr. discloses all of the claimed subject matter as described above.

Tsergas in view of Yeh, Kitamura and Riley, Jr. does not disclose that the inner-most perimeter of the elastic member is formed with a plurality of alternating first concave arc-shaped sections each having a radius  $R1$  and second concave arc-shaped sections each having a radius  $R2$ , with  $R2 > R1$ , and only the first arc-shaped sections fit directly around an outer cylindrical surface of the shaft.

Peterson teaches a wave/spring washer (Figures 4a and 4b) with the inner-most perimeter being formed with a plurality of alternating first concave arc-shaped sections (46a-c) each having a radius  $R1$  and second concave arc-shaped sections (42a-c) each having a radius  $R2$ , with  $R2 > R1$ , for the purpose of providing member which uniformly distributes the load (C2/L10-14).

It would have been an obvious to one having ordinary skill in the art at the time the invention was made to modify Tsergas in view of Yeh, Kitamura and Riley, Jr. and provide the inner-most perimeter of the elastic member is formed with a plurality of alternating first concave arc-shaped sections each having a radius  $R1$  and second concave arc-shaped sections each having a radius  $R2$ , with  $R2 > R1$ , and only the first

Art Unit: 3656

arc-shaped sections fit directly around an outer cylindrical surface of the shaft, as taught by Peterson, for the purpose of providing member which uniformly distributes the load.

### ***Response to Arguments***

10. Applicant's arguments with respect to claims 1-3, 8-10, 16-20, 22-25, and 27-31 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Art Unit: 3656

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James Pilkington whose telephone number is (571) 272-5052. The examiner can normally be reached on Monday-Friday 8:00AM-4:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Ridley can be reached on (571) 272-6917. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/JAMES PILKINGTON/

Examiner, Art Unit 3656

3/19/09

/Richard WL Ridley/

Supervisory Patent Examiner, Art Unit 3656

